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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/729,951	12/09/2003	Yuji Shimomura	Q78607	2703
65565	7590	07/05/2007		
SUGHRUE-265550			EXAMINER	
2100 PENNSYLVANIA AVE. NW			BURCH, MELODY M	
WASHINGTON, DC 20037-3213				
			ART UNIT	PAPER NUMBER
			3683	
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			07/05/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/729,951	Applicant(s) SHIMOMURA ET AL.	
	Examiner Melody M. Burch	Art Unit 3683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 February 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,6,7 and 10-12 is/are rejected.
- 7) ☒ Claim(s) 3,5,8 and 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. In view of the appeal brief filed on 2/23/07, PROSECUTION IS HEREBY REOPENED. New grounds of rejection are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

Robert Siconolfi

Robert Siconolfi 6/25/07
SPE AU 3683

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 2, 4, 6, 7, 10, 11, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6524009 to Kurimura et al. in view of JP-200046061 (JP'061).

Re: claims 1, 6, and 11. Kurimura et al. disclose a rolling bearing capable of use for a roll neck comprising an inner ring having an inner ring race at its outer peripheral surface disclosed in col. 6 line 13, an outer ring having an outer ring race at its inner peripheral surface disclosed in col. 6 lines 13-14, and a taper roller surface that is brought in contact with the inner and outer ring races disclosed in col. 6 line 14, wherein at least a first one of the inner ring race, the outer ring race, and the rolling surface, comprises a first portion with a formed film made of a material as disclosed in col. 6 lines 23-24, and wherein at least a second one of the inner ring race, the outer ring race and the rolling surface comprises a second portion on which there is disposed no formed film but which has a surface roughness of 0.1 μm or less but greater than 0 mm in terms of Ra as disclosed in col. 6 lines 25-27, and further wherein the second portion comes into contact with the first portion.

Kurimura et al. are silent with regards to the specific material of the formed film.

JP'061 teaches in the solution section of the English abstract the use of a manganese phosphate film on either or both of an inner and outer race of a rolling bearing device.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the material of the film of Kurimura et al. to have

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been manganese phosphate, as taught by JP'061, in order to provide a reduction of friction.

Re: claims 2 and 7. Kurimura et al., as modified, teach in col. 6 lines 30-32 of Kurimura et al. the limitation of the formed film on the first portion having a surface roughness of $0.3\text{ }\mu\text{m}$ or less or particularly $0.3\text{ }\mu\text{m}$ as calculated from the 0.3 ratio.

Re: claims 10 and 12. Kurimura et al. disclose having a surface roughness of $1.2\text{ }\mu\text{m}$ or less or, particularly, between $.1$ to $1.2\text{ }\mu\text{m}$, but lacks the limitation of the film being manganese phosphate and it being on a first and second portion of the bearing device.

JP'061 teach in the solution section of the English abstract the use of a manganese phosphate film on both an inner and outer race of a rolling bearing device.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the film to have been manganese phosphate and to have been placed on both the first and second portions, in view of the teachings of Kurimura et al., in order to provide a means of reducing friction within the bearing device for improved product life.

Allowable Subject Matter

4. Claims 3, 5, 8, and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Kurimura et al. teach the presence of a surface roughness of $0.1\text{ }\mu\text{m}$ or higher.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melody M. Burch whose telephone number is 571-272-7114. The examiner can normally be reached on Monday-Friday (6:30 AM-3:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Siconolfi can be reached on 571-272-7124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

mmb
June 25, 2007

Melody M. Burch
Melody Burch
Primary Examiner
6/25/07